

Purpose

The primary overall purpose of this project is to improve transportation safety and mobility through the city of Spokane and Spokane County between Interstate 90, Northeastern Washington, and Canada. The long-range plan for the Spokane region includes several projects intended to add to the development of a total transportation system. A more specific purpose for the action evaluated in this document is to improve the efficiency of the people- and freight-carrying capacity on and between city streets, county roads, and major northside transportation routes, particularly US 2 and US 395.

To meet the purpose and satisfy the underlying needs, this project has the following specific objectives:

- As much as practicable, reduce congestion in the overall transportation system projected for Design Year 2020.
- Improve system linkage between major northside arterial and state routes, reflected in reduced travel times.
- Be consistent with regional planning, to meet the needs of the Washington State Growth Management Act as implemented in Spokane County.

These first three objectives (above) were based on needs developed in Spokane Regional Council's (SRC), North Spokane Transportation Study-Long Term Improvements final report published in August of 1988.

- Support or facilitate the implementation of multimodal use concepts, such as a high capacity transportation corridor. This is based on needs identified in SRC's High Capacity Transportation Study.
- Conform to the State Implementation Plan (SIP) for CO and PM₁₀. This is a requirement of Federal Law because Spokane is located in a non-attainment area for carbon monoxide.
- Accommodate or improve intermodal transfers such as park and ride lots and rail/truck freight movement. The IDT recognized that economics require new facilities to promote efficiency and reduce costs for movement of freight and people.
- Provide for safe movement of people and freight by providing a limited access facility that has fewer points of conflict than local signalized major arterials. The IDT recognized the existing northside urban arterials, due to their design, have considerably higher accident rates than that of a limited access facility.
- Improve energy efficiency in the moving of people and freight. The IDT recognized that energy resources are finite and require conservation.

Need

Anticipated Growth

The development pattern for the region is currently guided by local comprehensive plans and zoning ordinances. These plans are generally oriented to suburban development, serving the automobile, and meeting parking demands. Based on this, population growth is taking place on the periphery of the urbanized area, with the fastest growing regions being the northern suburban and Spokane Valley suburban areas. See Table 1-1 and Figure 1-1.

Sector	1990	Forecast 2000	Forecast 2020
Northeast	55,697	56,226	56,767
Southeast	29,215	30,935	36,786
Northwest	69,503	72,742	79,277
Southwest	23,326	28,939	35,679
North Suburban	27,715	35,846	44,771
West Plains	13,320	15,734	15,757
South Metro	8,810	9,881	12,589
Spokane Valley	89,461	104,933	132,721
City of Spokane	177,196	188,825	211,495
Spokane County	361,364	411,943	496,570
NOTES: Bold text represents the sectors projecting largest growth. Source: U.S. Bureau of the Census (1950, 1960, 1970, 1980, 1990 Washington State Office of Financial Management (1991, 1993)).			

Population Growth Comparisons

Table 1-1

Specific growth projections are as follows:

North Spokane

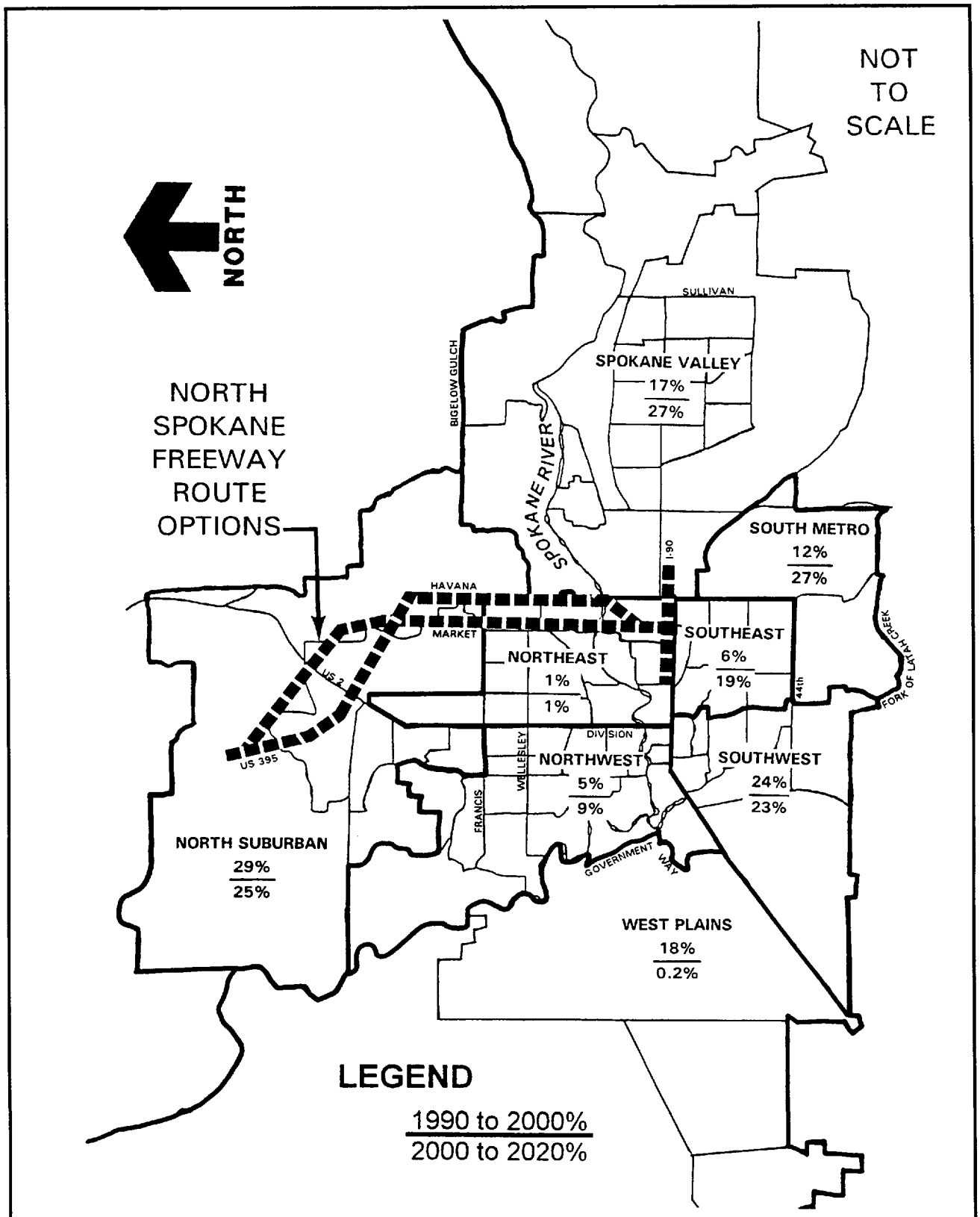
Housing

Several areas in the northern area of Spokane are projected to have strong growth potential to the year 2020. They are:

- Hillyard Neighborhood, including the Beacon Hill area east of downtown Hillyard.
- The area north of Francis Avenue between Crestline and Nevada Streets.
- The north suburban area. Almost 8,000 dwelling units are projected, over half of which are between and along the US 395 and US 2 corridors.

Employment

Modest increases are expected along the North Division corridor (north of Wellesley Avenue)



Spokane Area Projected Growth
Figure 1-1

The Northpointe area is projected for retail, medical, and professional office expansion.

Some growth is also shown in the industrial areas around Kaiser Mead.

The Burlington Northern Railroad (BNRR) is preparing a master plan for development of its vacant property east of Hillyard. This area shows potential for developing as a food processing/warehouse/distribution center. The current intermodal demand between rail and truck transportation has a strong expansion potential.

East Spokane, Spokane Valley

This area is projected as a major growth sector in the metropolitan area for both housing and employment.

Housing

Residential growth (approximately 3,500 units) is projected for north of Trent (SR 290) including the Upriver Drive corridor.

Employment

Non retail employment of up to 6,200 employees is projected for east central Spokane and the west valley industrial area.

The commercial corridor along Sprague Avenue between Argonne Road and Sullivan Road is projected to gain approximately 7,800 employees.

South Hill and South Spokane

Growth in this area is expected to be primarily residential, with a projection of about 4,000 new units.

Employment is expected to increase by only 1,200 employees. This would be in the retail, personal, and professional services areas.

Economic Development

City of Spokane Comprehensive Plan

Several of this plan's key policy aspects regarding commercial and industrial land use emphasize the need for a better transportation system in northeast Spokane; for example:

- Encourage more intense use, expansion, and redevelopment of reasonably located existing commercial areas, in preference to the establishment of new districts. Examples include the town of Hillyard and the Northpointe area (US 2/US 395 vicinity).
- Encourage business district expansion to consolidate rather than fracture the district.
- Encourage the assembly and redevelopment of under-utilized land in industrial areas. An example is the property east of Hillyard (area between Freya and Havana).
- Encourage mixed use development in areas undergoing redevelopment.

For each of these key policy areas, the common thread is transportation. The plan requires that off- and on-site improvements, right of way, street improvements, traffic/access control, circulation, and other transportation issues and facility support be addressed.

Spokane County Comprehensive Plan

Key goals in this plan that relate to transportation include:

- Encourage and support the development of a system of public transportation that safely and efficiently meets the needs of county residents.
- Encourage the planning, design, and management of a coordinated system of public and private transportation programs and facilities that maximize passenger and freight miles traveled per unit of energy consumed.

Goals for residential growth include promoting in-fill in areas where utilities, arterials, schools, and community facilities are already in place.

Clustered, multi-use commercial development is encouraged, to promote higher densities.

Industrial development objectives provide for medium and large scale industrial sites to be accessible to major transportation facilities. BNRR property east of Hillyard, and the land around Kaiser and BPA, are good examples of development potential.

The plan's energy goals focus on reducing the need for the use of private automobiles by encouraging the use of buses, carpools, and park and ride facilities.

With the northeast sector of the city of Spokane and adjacent parts of the county identified as key growth potential areas, the policies and goals of the two plans mentioned above must be addressed. Economic growth is affected by the availability of a good transportation system; the transportation infrastructure that currently exists is limited..~~The Spokane Economic Development Council has indicated that the lack of a efficient northside arterial system is a already a concern of businesses that might consider locating to the Spokane area.~~

Transportation Demand

Based on the existing and projected growth patterns, overall area traffic will increase by 35 percent in 2010 (with a projected 1,900,000 daily vehicle trips) and by 50 percent in 2020 (with over 2,100,000 daily vehicle trips). Projected trip distribution patterns follow growth patterns; the highest traffic volumes result from through trips between outlying areas of the Spokane region. Table 1-2 underscores the magnitude of the growth anticipated and the fact that external and through trips are expected to increase at higher rates due to development patterns.

	1990 Vehicle Trips	2010 Vehicle Trips	2020 Vehicle Trips	Percent Increase (1990-2020)
Internal Trips	124,440	166,622	188,302	51%
External Trips	4,747	7,035	8,645	82%
Thru-Trips	1,807	2,686	3,274	82%
TOTAL	130,994	176,343	200,221	53%
Internal Trips — Trips that begin and end in the Spokane traffic network External Trips — Trips that either begin within the network but end outside the network or begin outside the network and end within it Thru-trips — Trips that both begin and end outside the Spokane network but travel on roads within the Spokane network area.				

Comparison of PM Peak Trip Types

Table 1-2

Analysis of the Spokane Regional Transportation Council (SRTC) traffic modeling shows that most of the traffic growth forecast to occur between 1990 and 2020 will be in the outlying areas and in the southern portion of the city of Spokane. A breakdown shows that the Central Business District (CBD) will account for only 6 percent of the trips. Close-in areas across the Spokane River to the north will account for 30 percent of the PM peak hour trips, and the Spokane Valley will account for 27 percent of the PM trips.

Table 1-3 outlines the distribution of these trips. In terms of volumes, it is shown that most of the traffic to and from Spokane's CBD is and will continue to be oriented to the north across the Spokane River. The largest increase in volume over the 30-year period is projected to be towards the east and the Spokane Valley. The highest through volumes will be between western Spokane and eastern Spokane, with the most growth, proportionally, forecast to be between the northern and eastern portions of Spokane.

This growth equates to a substantial north-south travel demand in the east portion of Spokane's north side extending north of the Division "Y." East-west demands are expected in the Valley from Francis to the Idaho border and from the vicinity of Francis Avenue to the vicinity of Trent Avenue and Pines Road. With the current lack of east-west connections on Spokane's north side, especially east of Market Street, this movement is being primarily accommodated by north-south access to and from I-90. The above PM peak hour trip projections reflect an overall increase of 54 percent. A major portion of this demand is projected in the project study area. As the following discussion will show, the capacity to handle this projected traffic will not exist in design year 2020.

<u>To/From</u>	<u>1990</u>		<u>2020</u>	30 Year Percent Change	
	Volume	Percent	Volume	Percent	
CBD					
North	5,411	41.5	7,611	38.7	40.7
East	2,976	22.8	5,196	26.4	74.6
South	3,305	25.3	4,849	24.7	46.7
West	1,350	10.4	2,010	10.2	48.9
Total	13,042	100	19,666	100	50.8

EASTERN DISTRICT					
West	2,416	11.3	4,859	13.3	101.1
North	11,573	54.2	19,437	53.1	68.0
South	7,350	34.4	12,294	33.6	67.3
Total	21,339	100	36,590	100	71.5

SOUTHERN DISTRICT					
North	4,925	33.6	8,262	33.8	67.8
East	7,350	50.2	12,294	50.3	67.3
West	2,375	16.2	3,882	15.9	63.5
Total	14,650	100	24,438	100	66.8

WESTERN DISTRICT					
East	2,416	27.4	4,859	32.1	101.1
North	4,023	45.6	6,410	42.3	59.3
South	2,375	27.0	3,882	25.6	63.5
Total	8,814	100	15,151	100	71.9

NORTHERN DISTRICT					
South	4,925	24.0	8,262	24.2	67.8
East	11,573	56.4	19,437	57.0	68.0
West	4,023	19.6	6,410	18.8	59.3
Total	20,521	100	34,109	100	66.2

PM Peak Hour Distribution Patterns
Table 1-3

Capacity

When the total length of an arterial such as Division Street is examined, an overall LOS can be developed. Table 1-4 identifies several of the key arterials, projected overall LOS, and average travel speeds for the PM peak hour. LOS E represents operating conditions at or near the capacity of the facility. Operations at LOS E are considered unstable, and minor disruptions will cause system breakdown. These unstable conditions are anticipated over most of the arterial system within the study area by design year 2020. This is identified further in the intersection analysis results shown in Table 1-5.

Arterial	1993	Average Speed (mph)	2010	Average Speed (mph)	2020	Average Speed (mph)
Division						
Northbound	E	15	F	13	F	12
Southbound	D	20	E	16	E	17
Market/Freya						
Northbound	D	22	E	15	E	17
Southbound	C	23	E	14	E	15
Francis						
Eastbound	C	26	C	25	D	21
Westbound	E	16	E	15	E	13
Wellesley						
Eastbound	C	23	D	17	E	16
Westbound	E	14	E	14	E	14
Mission						
Eastbound	C	24	F	10	F	10
Westbound	E	17	E	14	E	14
Trent						
Eastbound	C	24	E	17	E	17
Westbound	D	22	F	12	F	11

PM Peak Hour Arterial LOS and Congestion Summary
Table 1-4

An examination of individual arterial link segments shows there will be capacity on the links in the year 2020. However, the key to examining the capacity of the existing system focuses on operation of the arterial intersections. Table 1-5 summarizes the intersection analyses and shows existing and projected levels of service for selected critical intersections within the project area. Table 1-5 also identifies volumes and corresponding capacities projected for the design year, gives another basis of comparison, and further reflects what the system condition will be. It is clear from this table that the system is at, and in most cases exceeding, capacity.

Washington State Department of Transportation	Existing Conditions	2010 Conditions						2020 Conditions						Havena North																						
		No Build	Market- Green North		Market- Green South		Havena North	Havena South	Market- Green North		Market- Green South		Havena South																							
			LOS Summary	V/C Ratio	Vehicle Delay (Sec.)	LOS Summary			V/C Ratio	Vehicle Delay (Sec.)	LOS Summary	V/C Ratio			Vehicle Delay (Sec.)	LOS Summary	V/C Ratio	Vehicle Delay (Sec.)																		
INTERSECTION																																				
Division/Farwell	E	0.87	48.1	F	1.28	103.1	F	0.94	72.2	E	0.93	43.2	F	0.95	72.1	E	0.82	40.6	F	1.50	108.2	F	0.92	70.4	F	1.29	128.8	E	0.91	59.3	F	1.24	120.7			
Division/Hawthorne	F	0.88	44.7	F	1.28	117.0	F	0.90	85.3	F	0.98	84.0	F	0.95	94.6	F	1.06	98.2	F	1.32	101.0	F	1.17	100.2	F	1.00	93.6	F	1.17	101.3	F	0.94	67.6			
Division/County Homes	E	0.95	55.6	F	1.11	114.6	F	0.98	69.8	F	1.15	109.9	F	1.03	105.4	F	1.16	109.3	F	1.17	108.0	F	1.21	110.0	F	1.18	111.7	F	1.23	110.3	F	1.16	109.6			
Division/SR 2	C	E	0.90	46.1	D			D					D				D				0.95	86.8	D													
SR 2/Hawthorne	D	B	F	0.96	73.1	D		F	1.10	108.6	C						F	1.18	119.1	F	1.09	103.8	F	1.22	133.9	C										
Nevada/Hawthorne	C							B					B				E	0.83	44.1	B			B													
Marked/Cox	F	1.33	84.0	F	3.12	150.0	F	1.27	100.0	F	1.57	133.9	F	1.14	84.1	F	1.26	112.2	F	4.73	182.7	F	1.88	126.6	F	0.98	79.6	F	1.59	117.2	F	1.11	92.0			
Marked/Hawthorne	D*	B						A					A				A						A													
Nevada/SR 2	E*	B						B	n/a				B	n/a			n/a						B	n/a												
Newport Highway/Farwell	C	F	0.98	74.2	F	0.94	49.7	D					E	0.91	50.6	C							F	1.23	128.0	F	1.22	90.0	E	1.26	128.7	F	1.23	105.1		
Division/Farwell	F	1.18	124.2	F	1.22	107.8	F	1.36	111.6	F	1.38	110.1	F	1.44	109.6	F	1.38	108.7	F	1.31	116.1	F	1.38	111.1	F	1.40	111.4	F	1.41	111.2	F	1.43	111.2			
Division/Welley	F	1.32	112.3	F	1.55	124.9	F	1.71	126.4	F	1.76	126.6	F	1.77	127.0	F	1.77	127.1	F	1.73	128.0	F	1.82	127.6	F	1.83	127.5	F	1.87	128.1	F	1.86	127.4			
Division/N. Foothills	F	0.97	87.4	F	0.95	67.8	E	0.94	63.9	E	0.95	54.6	E	0.93	49.5	E	0.95	46.7	F	1.02	88.4	E	0.95	48.5	E	0.97	50.2	E	0.96	40.1	E	0.95	63.6			
Ruby/N. Foothills	n/a							D					F	1.02	69.4	F	1.21	132.8	F	1.25	134.0	F	0.98	88.8	F	0.99	89.7	F	1.12	90.6	F	1.21	127.1			
Division/Mission	F	1.18	95.6	D				D					D				C					D		D		D										
Ruby/Mission	n/a							F	1.65	135.8	F	1.70	137.0	F	1.74	138.8	F	1.70	138.8	F	1.94	136.6	F	1.87	136.5	F	1.72	136.5	F	1.73	135.5	F	1.78	135.5		
Division/NB/Trent	C	F	1.03	104.2	E	0.93	40.8	E	0.93	43.1	E	0.94	53.8	F	0.99	87.0	F	0.99	87.0	F	1.14	132.9	E	0.96	58.1	E	0.96	52.1	F	1.00	90.8	F	1.00	94.8		
Nevada/Sokane Falls	B							C					D				E					D		D												
Bryone/Sprague	F	0.97	63.8	F	2.61	122.4	F	1.29	87.0	F	1.28	87.9	F	1.28	88.2	F	1.34	88.8	F	1.52	131.1	F	1.44	133.9	F	1.40	91.2	F	1.41	91.4	F	1.39	90.6	F	1.43	91.9
Division NB/Sprague	D	F	1.63	92.9	F	1.45	108.1	F	1.46	108.3	F	1.48	108.4	F	1.48	108.4	F	1.47	108.2	F	0.87	64.5	F	0.84	69.8	F	0.84	68.0	F	0.84	61.4	E	0.83	59.8		
Bryone/Sprague	C	D						C					C				F	1.28	81.1	F	1.37	86.8	F	1.38	90.8	F	1.39	90.8	F	1.41	89.1	F	1.40	87.8		
Division NB/2nd	F	1.29	82.0	F	1.21	81.7	F	1.17	80.2	F	1.28	81.1	F	1.28	81.1	F	1.28	81.5	F	1.20	135.9	F	1.20	135.9	F	1.19	134.9	F	1.19	135.2	F	1.18	136.4	F	1.16	134.3
Division NB/1st	D	F	1.05	97.0	F	1.10	117.9	F	1.10	121.6	F	1.09	116.2	F	1.09	116.2	F	1.10	116.8	F	1.20	135.9	F	1.20	135.9	F	1.19	134.9	F	1.19	135.2	F	1.18	136.4		
Bryone/2nd	C	F	1.03	68.6	F	1.05	70.3	F	1.04	69.5	F	1.06	70.2	F	1.06	70.8	F	1.06	70.8	F	1.14	74.4	F	1.20	77.2	F	1.21	78.0	F	1.21	78.4	F	1.24	79.8		
Scout/2nd	D	B						B					B				B					B		C		C										
Scout/1st	B							B					B				B					B		C		C										
Hamilton/Trent	D	F	1.08	98.1	F	1.27	111.9	F	1.24	114.9	F	1.21	115.4	F	1.21	115.4	F	1.12	101.6	F	1.23	102.8	F	1.04	94.1	F	1.05	101.0	F	1.09	108.5	F	1.09	107.3		
Hamilton/Mission	E	1.05	54.4	F	1.64	88.8	F	1.34	89.4	F	1.39	90.6	F	1.38	88.3	F	1.36	87.5	F	1.83	92.5	E	1.67	55.0	F	2.00	77.6	F	1.63	89.7	F	1.51	92.6			
Hamilton/Illinois	E	0.98	45.2	F	1.47	68.6	F	1.47	62.7	F	1.42	62.0	F	1.50	62.2	F	1.53	62.8	F	1.62	76.6	F	1.41	63.3	F	1.43	63.1	F	1.95	69.6	F	1.53	63.5			
Nevada/Welley	F	0.91	60.3	F	1.20	81.0	D		0.88	40.7	D						D					1.14	89.0	F												
Hamilton/Welley	E	0.80	42.9	E	0.94	55.3	E	0.90	53.9	E	0.87	48.6	E	0.87	46.5	E	0.88	48.1	F	1.01	81.6	F	0.98	75.6	F	1.00	80.6	E	0.92	59.2	F	0.95	63.3			
Nevada/Farwell	D	E	1.21	86.1	F	1.21	82.4	F	1.21	81.5	F	1.21	81.5	F	1.16	65.9	F	1.24	83.5	F	1.28	55.3	F	1.44	82.7	F	1.50	85.7	F	1.44	82.8	F	1.50	86.5		
Frya/Hanson	E							E	1.12	41.2	E	1.10	41.1	E	1.10	41.1	E	1.09	40.8	D			n/a		n/a		n/a									
Frya/2nd	C	F	1.18	84.8	E	1.26	105.9	E	1.09	83.4	E	1.07	96.6	E	1.06	85.5	F	1.32	90.0	F	1.32	90.0	F	1.35	110.2	F	1.43	121.1	F	1.51	139.2	F	1.83	112.3		
Frya/Sprague	C	F	1.42	93.7	F	1.37	110.3	F	1.38	112.4	F	1.66	106.3	F	1.36	124.1	F	1.36	124.1	F	1.67	109.2	F	1.35	110.2	F	1.43	121.1	F	1.51	139.2	F	1.83	112.3		
Frya/Broadway	F	1.37	72.8	F	2.03	113.4	F	1.65	91.6	F	1.64	92.0	F	2.42	131.1	F	2.07	96.3	F	2.43	118.2	F	1.36	92.0	F	1.46	92.7	F	2.01	98.6	F	2.44	118.5			
Frya/Trent	P	1.40	102.2	F	1.48	114.3	F	1.59	114.6	F	1.81	114.5	F	1.88	124.5	F	1.83	125.5	F	1.66	113.3	F	1.34	122.2	F	1.39	116.0	F	1.39	120.3	F	1.64	119.8			
Frya/Mission	F	1.29	106.4	F	1.44	154.6	F	1.30	132.1	F	1.28	119.6	F	1.03	106.8	F	0.99	86.6	F	1.89	150.4	F	1.36	131.8	F	1.43	133.7	F	1.10	99.3	F	1.30	118.1			
Haven/Welley	C	A						B					A				A					B		C		C										
Marked/Welley	B	B						B					B				B					B		B		B										
Marked/Farwell	C	E	0.80	51.6	D			D					B				F	4.85	100.5	B			D		D											
CD EB/Thor	n/a	n/a						D					B				C					n/a		D		D										
CD WB/Thor	n/a	n/a						n/a					n/a				n/a					n/a		B		B										
NSF NB/Trent	n/a	n/a						B					D				n/a					n/a		B		B										
NSF SB/Trent	n/a	n/a						C					C				n/a					n/a		C		C										
NSF SB/Welley	n/a	n/a						B					A				B					n/a		B		B										
NSF NB/Welley	n/a	n/a						C					B				B					n/a		C		C										
NSF NB/Farwell	n/a	n/a						B					B				B					n/a		B		B										
NSF SB/Farwell	n/a	n/a						D					C				C					n/a		B		B										
NSF NB/Farwell	n/a	n/a						D					B				C					n/a		B		B										
NSF SB/Soneman	n/a	n/a						n/a					n/a				n/a					n/a		n/a		B										
NSF NB/Soneman	n/a	n/a						n/a					n/a				n/a					n/a		D		D										
NSF SB/SR 2	n/a	n/a						n/a					C				C					n/a		n/a		B										
NSF NB/SR 2	n/a	n/a						n/a					B				B					n/a		B		B										

* Unsignalized - LOS for worst leg reported

Intersection LOS Conditions — Existing and Future
Table 1-5

In 2010 and 2020, most of the intersections analyzed will operate at LOS F. Between 1990 and 2010, PM peak hour traffic volumes entering individual intersections in the project area will increase on average by over 1,000 vehicles per hour (VPH). Increased delays at these critical intersections will reduce speeds and increase travel times along all major travel corridors in the study area.

Table 1-5 also shows other key data for intersections with LOS of E or F, such as demand volume to capacity (V/C) ratios and expected average vehicle delays. The demand V/C ratios listed for several intersections exceed 1.0, indicating again that the projected demand exceeds the capacity of the intersection, based on a weighted average of approach saturation values. Volume to capacity ratios exceeding 1.2 represent an over assignment of traffic by the traffic model. Based on the projections, there will be no additional capacity on the existing system.

Modal Interrelationships

Several recent state and federal laws affect transportation throughout Washington. They include:

- The state's Growth Management Act, which provides new tools for local governments to plan for growth and the transportation facilities that support that growth.
- The Clean Air Act, which mandates transportation efforts to ensure healthy air.
- The federal Intermodal Surface Transportation Efficiency Act (ISTEA), which changes the way transportation decisions are made, giving state and local governments more flexibility to respond to their individual needs.

Federal law requires states to develop a management system to ensure that transportation choices are made available; transportation modes are connected, safe, reliable, and seamless; and transportation services are coordinated. Washington State is meeting the intent of this federal mandate through the Washington Statewide Multimodal Transportation Plan. This planning is being carried out in cooperation with local governments, regional agencies, and private transportation providers.

The existing transportation system in the Spokane area consists of a state roadway system supplemented by a network of principal arterials owned by the city of Spokane and Spokane County, along with transit service provided by the Spokane Transit Authority. Union Pacific and Burlington Northern Railroad operate both passenger and freight services in the region. Non motorized facilities include sidewalks, multipurpose trails, and bike lanes.

Regional deficiencies and needs are as follows:

- Travel between systems and modes in the public transportation system, including non motorized facilities, is difficult. Improvements are needed in connectivity, rural mobility, and geographical accessibility.
- There are deficiencies in freight interface between rail and truck. With the exception of I-90, trucks must use local arterial streets to access freight interface locations with rail. There is a need for local jurisdictions to address rail use and rail facilities in their local comprehensive plans. The focus should be to encourage protection of rail facilities and corridors from encroachment of

non-compatible uses. Cooperation between private railroads and local agencies is required to encourage efficient use of rail facilities.

Future plans to help address the above deficiencies include the following:

- Transit

Spokane Transit Authority (STA) long-range plans include park and ride lots in the vicinity of US 395 and Hastings Road and US 2 and Farwell Road.

Future service elements in the STA Comprehensive Plan (April 1993) are based on movement from a “strictly multi-center concept to one which maintains the emphasis on transit centers while placing new emphasis on transit corridors—focusing regional services along major freeways and arterials.”

The comprehensive plan identifies a proposed increase from the existing three outlying transit centers to a total of 12. These new centers would be located in outlying activity centers that have good accessibility and are trip attractors.

- Rail

Burlington Northern Railroad (BNRR) views its vacant property in northeast Spokane (east of the city of Hillyard) as having development potential. BNRR is currently studying the area and developing a master plan for future use of the property. The railroad has an active line through the property, with several spur lines feeding existing businesses. One of the major attractions of the property is this rail access and the truck-to-rail interface potential.

Safety

Providing safe roadways is a key service objective of the development and maintenance of the state highway system. Working with local agencies is a key factor in accomplishing this critical goal. Most arterials in the project vicinity, most notably Division, Nevada/Hamilton, Market/Greene, Mission, Trent, and Sprague, are experiencing a high number of accidents. This accident experience would be expected to continue or worsen as congestion increases.

Two measures are commonly applied to evaluate the significance of intersection accidents, namely: 1) the number of accidents occurring in a year and (2) the number of accidents per million entering vehicles (MEV). In the first case, signalized intersections with more than 10 accidents per year are considered to be high accident locations. However, this does not take relative exposure into consideration. The second measure does. In this case, high accident locations may be identified as those with more than one accident per MEV. Of the 21 major intersections in north Spokane from Division Street east that meet the first criterion (10 or more accidents per year), 13 would also meet the MEV criterion (see Table 1-6).

Another measure of the severity of accident occurrences on lengths of city streets and rural roads is the number of accidents per million vehicle miles (MVM). With different criteria to indicate high accident locations, this can be used for mid-block accidents or accidents along streets in general, including intersections. The criteria are taken from *A Manual on User Benefit Analysis of Highway and Bus Transit Improvements*, published by the American Association of State Highway and Transportation Officials. Table 12 in that publication indicates that streets with more than 5.17 total accidents per million vehicle miles can be considered high accident locations. The statewide accident rate for 1991 was 2.86 per MVM for

urban principal arterials. Table 1-7 shows high accident street sections in north Spokane east of Division. The table also identifies those locations that have a record of high injury accidents based on severity.

Based on the projected travel demands, the existing system will need to absorb an increased number of vehicles at the high accident locations. Statistically, that equates to increased accident rates and less safe conditions. Numerous spot improvements are identified in state and local plans to address some of these deficiencies. However, based on projected traffic increases, there will still be a need to reduce the number of vehicles using the system at these critical locations.

Intersection	Average No./Year	No. Per MEV	No./Year	MEV
US 2 and Farwell			3.6	0.50
US 2 and Hawthorne	121	1.12*	5.3	0.50
U.S. 395 and Hawthorne	11	1.56*	4.6	0.64
Division and Lincoln Road	25	1.89*	8.3	0.61
Division and Francis	22	1.11*		
Division and Wellesley	24	1.44*		
Division and Empire	19	1.31*		
Division and Indiana	12	0.71		
Division and Mission		0.96		
Division and Trent	11	0.67		
Division and Sprague	34	1.92*	11.6	0.66
Division and 2nd/3rd	30	1.73*	9.0	0.51
Nevada and Francis	18	1.09*		
Nevada and Wellesley	20	1.38*		
Nevada and Empire	17	1.17*		
Hamilton and Mission	28	1.31*		
Hamilton and Trent	15	0.80		
Havana/Market and Wellesley	11	0.69		
Greene and Euclid	24	1.69*		
Market/Greene and Illinois	11	0.61		
Greene and Mission	15	0.68		
Freya and Sprague	18	0.97		
NOTES: Three close intersections treated as one. * High Accident Location. ** Only locations categorized as having the highest number of accidents based on severity are identified.				

High Accident Locations (Major Intersections) 1991-1992
Table 1-6

Street	Cross-Street Limits	Accidents Rate Per MVM	Injury Accident Rate Per MVM
Division	2nd/3rd Couplet to Sprague	8.36	
Division Couplet	Sprague to Trent	10.95	3.67
Division	Trent to Mission	5.31	
Division	Mission to Indiana	5.66	
Hamilton/Nevada	Trent to Mission	5.33	
Hamilton/Nevada	Illinois to Empire	7.82	
Hamilton/Nevada	Euclid to Empire	7.82	3.10
Francis	Division to Nevada	7.50	
Wellesley	Division to Nevada	6.62	3.79
Mission	Hamilton to Napa	7.01	2.39
Trent	Hamilton to Napa	7.06	2.41
Sprague	Hamilton to Napa	9.50	
*Only locations categorized as having the highest number of accidents based on severity are identified.			

High Accident Locations (Major Street Sections) 1991
Table 1-7